

REMARKS

Claims 1 and 3 remain in the application. Claim 2 has been cancelled. New claims 4-7 have been added to the application. Claims 1 and 3 are in independent form.

First, claim 1 stand objected to because there is no proper antecedent basis for "the at least one embossment". In response, Applicant has amended claim 1 to set forth proper antecedent basis as including "by lancing at least one embossment".

Second, claims 1 and 2 stand rejected under 35 USC 102(b) as being anticipated by Takasago et al. in Japan patent document no. 2001-162,387. The Examiner contends that Takasago et al. discloses providing coated sheets of metal, punching at least one embossment on at least one coated metal sheet, the embossment comprising a depression having a raised peripheral edge, and applying a laser beam wherein the gases produced during the forming of the weld escape via the at least one embossment.

In response, Applicant has amended independent claim 1 to set forth a method of laser welding a plurality of coated metal sheets comprising the steps of: providing coated sheets of metal having opposing first and second surfaces; creating a raised region on at least one of the coated sheets, the raised region formed on the first surface by lancing at least one embossment on at least one coated metal sheet, the embossment comprising a depression having a raised peripheral edge, and wherein the second surface remains continuous and uninterrupted; juxtaposing the coated sheets to introduce a gap therebetween, the gap defined by the raised region; and applying a laser beam forming a laser weld wherein gases produced during the forming of the laser weld escape via the gap.

Takasago et al. does not disclose the step of forming a raised region on at least one of the coated sheets by **lancing** at least one embossment in the first surface of the coated metal sheets. Rather, Takasago only discloses pressing a portion of the metal sheet with a punch (17) to form a rounded depression in the sheet and an annular built-up zone (15) surrounding the depression.

The punch (17) requires a press (23) to support the opposing side of the metal plate while forming the rounded depression therein.

The step as set forth in Applicant's invention defined in claim 1 includes lancing at least one embossment in the first surface of the coated metal sheet. That is, the lancing actually pierces a hole in the first surface of the metal sheet while also forming the raised peripheral edge therearound. Further, the lancing step does not require the use of a press to support the opposite side of the metal sheet wherein the second surface remains continuous and uninterrupted by the lancing of the embossments. The lancing requires significantly less force to form the embossment in the metal sheet and also less manufacturing equipment.

Therefore, Applicant submits that Takasago clearly does not specifically teach, suggest, or disclose the step of lancing at least one embossment on at least one coated metal sheet, wherein the embossment comprising a depression having a raised peripheral edge, and the rejection should be withdrawn.

Third, claim 1 also stands rejected under 35 USC 102(b) as being anticipated by Gu in WO 99/08829. The Examiner contends that Gu discloses welding two coated sheets of metal, creating a raised region (a protuberance 15) on one of the coated sheets, and applying a laser beam forming a laser weld wherein gases produced during the forming of the laser weld escape via the at least one embossment.

In response, as discussed above, Applicant has amended independent claim 1 to include the raised region being formed on the first surface by lancing at least one embossment on at least one coated metal sheet, the embossment comprising a depression having a raised peripheral edge, and wherein the second surface remains continuous and uninterrupted. The embossment or protuberance 15 in Gu is not created by lancing at the first surface of the metal sheet. Rather, the protuberances 15 of Gu are created by transmitting a series of laser beam pulses onto the surface of the metal sheet. Therefore, the rejection must be withdrawn.

Finally, claim 3 stands rejected under 35 USC 103(a) as being unpatentable over Gu in view of Delle Piane et al. in U.S. Patent No. 4,682,022 and McCane et al. in U.S. Patent No. 6,592,947 or Ishii et al in Japan patent no. 4-4,145. The Examiner admits that Gu does not disclose applying fine particles on the metal sheet to create a space between two sheets for the expansion of vapour gas. However, the Examiner contends that McCane et al. teach coating the metal sheet with zinc particles to create an uneven surface. Alternatively, Ishii et al. teach coating the sheet with zinc particles to create voids between two sheets.

In response, Applicant has amended claim 3 into independent form to set forth a method of laser welding a plurality of coated metal sheets comprising the steps of: providing coated sheets of metal having opposed first and second surfaces; creating a raised region on at least one of the coated sheets, the raised region formed on the first surface by plasma spraying fine particles between the plurality of coated metal sheets; introducing a gap between the coated metal sheets, the gap defined by the raised region; and applying a laser beam forming a laser weld wherein gases produced during the forming of the laser weld escape via the gap.

None of the cited references disclose, teach, suggest or provide any incentive or motivation for specifically forming the raised region on the coated metal sheet by plasma spraying fine particles between the plurality of coated metal sheets. The step of plasma spraying the fine particles is clearly not provided for in any of the cited references whether taken alone, in combination, or even by hindsight. Therefore, Applicant submits that independent claim 3 distinguishes the invention over the cited prior art and the rejection should be withdrawn.

Finally, Applicant has added new claims 4-7 to further characterize the invention over the prior art.

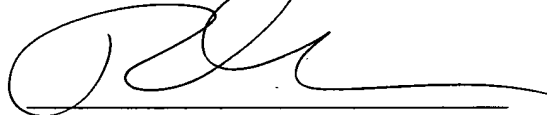
Accordingly, it is believed that the application is in condition for immediate allowance and Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Appl'n No: 10/567,877
Reply to Office Action dated November 13, 2006
Amd't dated February 7, 2007

Should the Examiner have any questions regarding the response to this Office Action, the Examiner is invited to contact the undersigned attorney for the applicant.

The Commissioner is hereby authorized to charge any underpayment or credit any overpayment of the above fees associated with this Communication to Deposit Account No. 50-1759.

Respectfully submitted,



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